

UNCLASSIFIED
FISCAL (FY) 2005 DESCRIPTIVE SUMMARIES

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				R-1 Item Nomenclature: Logistics R&D Technology Demonstration 0603712S			
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	130.577	123.111	27.542	24.905	26.565	27.022	27.488
Project 1: Material Acquisition: Electronics (MAE)	16.573	9.571	10.160	10.267	10.326	10.494	10.678
Project 2: Computer to Computer Negotiations (CCN)	3.562	-----	-----	-----	-----	-----	-----
Project 3: Pay Per Use Logistics System (PUL)	1.747	-----	-----	-----	-----	-----	-----
Project 4: Aging Aircraft Sustainment Technology (AAST)	5.349	6.023	5.293	5.388	5.469	5.557	5.652
Project 5: Virtual Reality Medical Assembly (VRMA)	0. 594	1.902	2.946	2.947	1.935	1.968	2.002
Project 6: Diminishing Manufacturing Source Data (DMS)	0.974	2.473	-----	-----	-----	-----	-----
Project 7: Computer Assisted Technology Transfer (CATT)	2.723	-----	-----	-----	-----	-----	-----
Project 8: Competitive Sustainment (CS)	0.965	0.976	1.196	2.356	4.893	5.546	5.402
Project 9: Supply Chain Management (SCM)	15.564	3.375	3.457	3.457	3.453	-----	-----
Project 10: Agent Based Logistics Processes (ABLP)	-----	-----	-----	-----	-----	2.969	3.267
Project 11: eMASS (Completion Project)	-----	1.265	0.490	0.490	0.489	0.488	0.487
Project 12: Defense Microelectronics Activity (DMEA)	58.321	73.314	-----	-----	-----	-----	-----
Project 13: Other Congressionally Added Programs (OCAs)	22.955	20.381	-----	-----	-----	-----	-----
Project 14: Logistics Domain (LD)	1.250	-----	-----	-----	-----	-----	-----
Project 15: Continuous Acquisition Life- Cycle Support (CALS)	-----	3.831	4.000	-----	-----	-----	-----

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3		R-1 Item Nomenclature: Logistics R&D Technology Demonstration 0603712S	
A. Mission Description and Budget Item Justification: The DoD logistics vision calls for providing flexible, cost effective and prompt materiel support, logistics information and services, achieving the leanest possible infrastructure and the employment of the best commercial and government sources and practices. The DLA Logistics R&D program will develop and demonstrate high risk, high payoff technology that will provide a significantly higher level of support at lower costs, than would be otherwise attainable. This DLA program is a key part of the DARPA/DLA Advanced Logistics Program. Focused Logistics is one of the five basic tenants of Joint Vision 2020. The DLA Logistics R&D program contributes directly to achieving JV 2020’s vision of logistics “support in hours or days versus weeks.” The objective of the Advanced Logistics Program is a collaborative environment that will allow the Operations community (J3) and Logistics planning community (J4), TRANSCOM, and DLA to seamlessly interact on operations planning and execution of wartime operations. In addition, DLA will use the same system in peacetime to significantly reduce Logistics Response Time and reduce the cost of DLA operations while maintaining readiness. The following synopses cover the programs under the DLA Log R&D PE:			
B. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)			
	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Previous President's Budget	129.291	22.359	23.542
Current President's Budget	130.577	123.111	27.542
Total Adjustments	+1.286	+100.752	+4.000
Congressional Increase		+98.200*	
Reprogrammings/transfer		+3.831	+4.000
Program adjustments	+1.286	-1.279	
Change Summary Explanation: FY 2003 reflects (+\$1.250 million) for additional funding provided by OSD in the 4 th Qtr FY 2003 for Logistics Domain owner costs in support of portfolio management and enterprise architect portions of the LSM mission and (+\$0.036 million) for a minor program adjustment. FY 2004 reflects a net increase (+\$100.752 million) due to (+\$98.2 million) in congressionally added programs; (+\$3.831 million) for the Continuous Acquisition and Life-Cycle Support (CALS) program transferred from OSD to DLA; and (-\$1.279 million) for pro-ration of DW FY 2004 Appropriations Act adjustments for DW savings from management improvements per Section 8094 (-\$0.255 million) and DW savings from outsourcing management efficiencies, and economic assumptions per Section 8126 (-\$1.024 million).			
*See Exhibits R-2a for programs and net funding for the following adds : Star4D Pollution Prevention (\$1.0 million); DMS Data Warehouse Solution (\$2.5 million); several Defense Microelectronics Activity (DMEA) advanced technologies programs (\$74.1 million); and Other Congressional Adds (OCAs) for the California Manufacturing Center (\$5.1 million); Connectivity for Rapid ID of Tech Sources (\$1.0 million); Wireless Rural Communication Demonstration (\$3.0 million); Fuel Cell Mine Loader Prototype Locomotive (\$1.0 million); Vehicle Fuel Cell Program (\$4.9 million); and New England Manufacturing Supply Chain (\$5.6 million).			
C. Other Program Funding Summary: N/A			

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Material Acquisition: Electronics (MAE), Project 1			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 1: MAE	16.573	9.571	10.160	10.267	10.326	10.494	10.678
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: Develop a capability to emulate most obsolete digital integrated circuits (ICs) in the federal catalog using a single, flexible manufacturing line. DoD has estimated that \$2.9B is spent every five years in redesigning circuit card assemblies. Much of these redesigns are driven by IC obsolescence. The commercial suppliers of ICs typically terminate production lines every 18 months, moving on to the next generation of ICs. Because DoD maintains weapons systems much longer than 3 years, this creates an obsolescence problem that can only be overcome through buying excessive inventories of parts before the production lines close or redesigning the next higher assembly to eliminate the obsolete part. DLA, as the manager of 88% of the IC supply class, must have a capability to manufacture these devices. This project develops this capability and will expand it to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation program.</p>							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	9.665	9.571	10.160				
RDT&E Articles Quantity – N/A							
<p>The MAE project covers development of IC fabrication technology to continue to expand the capability to emulate succeeding generations of discontinued technology. This will include Low Rate Initial Production of earlier development efforts (e.g., 200K emulation Array) and integration of Advanced Tooling and development of future capabilities (e.g., High Speed/ High Density Emulation Arrays). Technology development will continue to deeper sub-micron (<1.0 um) feature sizes and faster operating speeds. Development of IC design capability and design model library to realize emulation performance and functional requirements outcomes using developed IC fabrication technology. This design capability will address both standard catalog ICs and Application Specific Integrated Circuits (ASICs) and will accommodate both in-house and third-party (principally OEM) design requirements.</p>							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	6.908	-----	-----				
RDT&E Articles Quantity – N/A							
<p>The congressionally added Microelectronics Testing Technology/Obsolescence Program will test, evaluate, and assess wide range microelectronics components that comprise so many of today's sophisticated military, and commercial systems.</p>							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Computer to Computer Negotiations (CCN), Project 2			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 2: CCN	3.562	-----	-----	-----	-----	-----	-----
RDT&E Articles Quantity- N/A							
<p>A. Mission Description and Budget Item Justification: Current DLA/Service systems are unable to allow accurate visibilities to respond to the rapidly changing requirements. Cross-organizational system interfaces are needed for the supply chain decision-making process. The re-engineering effort under BSM does provide for eventual solution, however there are immediate needs to identify areas of gaps and develop interfaces, such as the integration of Service ERP system to the DLA Depot inventory system (DSS). Approach: The purpose of this activity is to capture supply-chain-wide visibilities and to use knowledge based intelligent workflow technologies to develop system interfaces that support the establishment of automated business processes and transactions between the Services and DLA.</p>							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	3.562	-----	-----				
RDT&E Articles Quantity – N/A							
<p>Initiated the R&D development towards the expansion of computer software agent to agent negotiation techniques utilizing the ALP architecture in support of DLA application in classes I (Subsistence) and VIII(Medical) supply support plans. US Army Medical Materiel Agency (USAMMA) and Defense Supply Center Philadelphia, Medical (DSCP-M) need to develop a shared systems interface for demand forecasting and achievement of medical set assembly goals in FY02. A prototype will be developed to mitigate the long lead-times and static nature in medical assembly processes and address gaps in the current legacy ERP systems at DLA and USAMMA.</p>							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number Pay per Use Logistics Systems (PUL), Project 3		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 3: PUL	1.747	-----	-----	-----	-----	-----	-----
RDT&E Articles Quantity- N/A							
<p>A. Mission Description and Budget Item Justification: The emergence of complex networked computer systems promises to enhance DoD Logistics functions with new sources of information and services. Our vendor communities are developing rich sources of commodity information and information services. Functions that are currently done by government personnel and contractors might be better done on a "pay-per-use" basis by these new sources. For example, in times of conflict, the number of transactions processed by DLA systems do not increase greatly, but the number of items purchased does. The job of finding adequate sources and product equivalents is still labor intensive. Access to web-based information sources would improve procurement efficiency and the readiness of our customers. There are two basic issues that must be solved if we are to make use of these new capabilities. First, there must be a level of trust and assurance established with our commercial partners. This program will develop ways of automating information assurance relationships, especially in an environment that might be under attack. Second, the richness of information that is exchange must be increased. Use of human cognitive engineering will be used to support the functions of our knowledge workers to increase their efficiency while improving the quality of the services provided.</p>							
B. Accomplishments/Planned Program:							
	FY 03			FY 04			FY 05
Accomplishment/ Effort/Subtotal Cost	1.747			-----			-----
RDT&E Articles Quantity – N/A							
<ul style="list-style-type: none"> • Initial awards for concept studies. • The concepts were evaluated and prototypes will begin to be developed. • Explore using the Advanced Logistics Program (ALP) technology to allow for interoperability between existing DLA applications. 							
<p>C. Other Program Funding Summary: N/A</p>							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – Aging Aircraft Sustainment Technology (AAST), Project 4			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 4: AAST	5.349	6.023	5.293	5.388	5.469	5.557	5.652
RDT&E Articles Quantity- N/A							
<p>A. Mission Description and Budget Item Justification: The mission is to fund efforts to explore, develop, and prototype tools & technologies that both help DLA people do their jobs better when it comes to supporting aviation part customers and help those customers coordinate & collaborate their efforts with DLA to solve parts issues.</p> <p>The current effort is divided into two major thrusts: Parts Situation Awareness and Supply Response Time</p> <ul style="list-style-type: none"> • Parts Situation Awareness targets providing DLA people and its aviation part customers with tools/technologies that provide a more comprehensive and accurate view of the current and emerging parts situation; reducing the number of “surprises” • Supply Response Time takes on the challenge of reducing DLA’s reaction time to those inevitable surprises that cannot be prevented via better parts situation awareness. It seeks improvements in processes & practices aided by tools/technologies. <p>Part of the Aging Aircraft Sustainment Program is the Corrosion Prevention feature. In FY 2003, Milstar Painting and Coating Pollution Prevention, a congressional add, was funded under AAST (\$0.973 million). In FY 2004 the Star 4D Pollution Prevention, a congressional add is also funded under AAST (\$0.990 million).</p> <p>B. Accomplishments/Planned Program:</p>							
	FY 03	FY 04	FY 05				
AAST	4.376	5.033	5.293				
RDT&E Articles Quantity - N/A							
Investigate and develop methods and tools for improved parts situation awareness in order to employ a more proactive approach to aircraft parts availability and supply. This thrust improves DLA’s ability to predict DoD customer needs for increasing fleet maintenance requirements on aging aircraft. It includes efforts such as the development of various data extraction tools and techniques to access a wide variety of customer and supplier data bases, systems, or networks, extract relevant information, and present that information in a tailored fashion for use by program managers, maintainers, item managers, and buyers. Characterization of items of supply unique to the problems associated with the maintenance requirements for aging aircraft and their impact on DoD customer metrics such as fleet readiness levels, depot repair cycle time, cost etc.							
	FY 03	FY 04	FY 05				
Star4D Pollution Prevention	0.973	0.990	-----				
RDT&E Articles Quantity - N/A							
The IOWA Waste Reduction Center (WRC) at the University of Northern Iowa (UNI), in cooperation with the U.S. Environmental Protection Agency, has developed a training program for spray technicians known as Spray Technique Analysis and Research (STAR). The STAR 4 Defense (STAR4D) will take STAR training techniques and equipment to selected sites to train and educate military painting technicians. The approach for STAR4D will be to train trainers so they can conduct the STAR program at their home base and provide oversight for continued improvement and data collection.							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – Virtual Reality Medical Assembly (VRMA), Project 5			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 5: VRMA	0. 594	1.902	2.946	2.947	1.935	1.968	2.002
RDT&E Articles Quantity- N/A							
A. Mission Description and Budget Item Justification: Defense Logistics Agency (DLA) has the responsibility to procure Medical Assemblies for the Services. These Medical Assemblies are complex in nature and change frequently to accommodate new types of form, fit, function, and utility. This program will attempt to utilize technology to reduce lead times, to reduce the logistics footprint, and to reduce overall assembly life-cycle costs.							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	0. 594	1.902	2.946				
RDT&E Articles Quantity – N/A							
This effort began in FY 2001 with Joint Application Development (JAD) sessions to formalize requirements. Market analysis will be performed to identify the most appropriate virtual reality technology to employ, and detailed system specifications will be created. In FY 2002, a prototype of first-aid kits was developed. In addition, formal requirements will be developed for a more complex medical assembly. In FY 2003, the first-aid kit assembly was made ready for a production environment, the more complex medical assembly will be prototyped, and commercial data interfaces will be established. In FY 2004, DLA will prototype an entire field hospital assembly and will look to apply the technology to other processes within DLA. In FY 2005, DLA plans for full-scale production and demonstrations.							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification						Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number – Diminishing Manufacturing Source Data (DMS), Project 6		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 6: DMS	0.974	2.473	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: As aircraft, ships, and other vehicles are being expected to operate much longer than originally designed, the supply of parts for these systems has become a significant problem. When systems and components can no longer be obtained they are called diminishing manufacturing source (DMS) problems. Throughout the military, there are literally hundreds of independent operations attempting to solve steadily worsening DMS problems. Because these operations are very "stove-piped" in their existence, they do not share information across weapon systems, even though many parts are common. The only method to decrease this ever expanding cost to solve DMS problems would be to have a central repository of part solutions, shared across all weapon systems and all services. In order to create a central repository of military parts, a very large data warehouse will need to be created and populated with solutions to these DMS part problems.</p>							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	0.974	2.473	-----				
RDT&E Articles Quantity – N/A							
<p>Develop a central repository of part solutions, shared across all weapon systems and all services. In order to create a central repository of military parts, a very large data warehouse will need to be created and populated with solutions to these DMS part problems.</p>							
<p>C. Other Program Funding Summary: N/A</p>							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004												
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number – Computer Assisted Technology Transfer (CATT), Project 7														
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09												
Project 7: CATT	2.723	-----	-----	-----	-----	-----	-----												
RDT&E Articles Quantity - N/A																			
<p>A. Mission Description and Budget Item Justification: This initiative is necessary to identify and establish commercial manufacturing capabilities so that DLA Centers can acquire parts as they are needed (on demand) rather than investing in excessive stock, or risking non-availability of essential parts when needed. Contracting relationships will be established to obtain small quantities of military unique items of low demand, with significantly lower costs and greatly improved response time. This is an effort to use private sector manufacturers, in addition to all other measures to obtain parts quickly. CATT establishes a network of companies to produce parts in a very short production lead-time with minimum administration. This is a congressionally added program.</p> <p>B. Accomplishments/Planned Program:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 03</td> <td style="text-align: center;">FY 04</td> <td style="text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishment/ Effort/Subtotal Cost</td> <td style="text-align: center;">2.723</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> </tr> <tr> <td>RDT&E Articles Quantity – N/A</td> <td></td> <td></td> <td></td> </tr> </table> <p>Develop forecasting tools for low demand items. Develop corrosion protective compounds to replace paint primer systems. Provide support for Warner Robins ALC maintained aircraft spare parts.</p> <p>C. Other Program Funding Summary: N/A</p>									FY 03	FY 04	FY 05	Accomplishment/ Effort/Subtotal Cost	2.723	-----	-----	RDT&E Articles Quantity – N/A			
	FY 03	FY 04	FY 05																
Accomplishment/ Effort/Subtotal Cost	2.723	-----	-----																
RDT&E Articles Quantity – N/A																			

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – Competitive Sustainment (CS), Project 8			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 8: CS	0.965	0.976	1.196	2.356	4.893	5.546	5.402
RDT&E Articles Quantity - N/A							
A. Mission Description and Budget Item Justification: Competitive Sustainment (CS) was added by Congress in FY 2000 in recognition of the need to make a substantial reduction to the cost of support for aging weapon systems.							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	0.965	0.976	1.196				
RDT&E Articles Quantity – N/A							
<p>A competitive source selection process was conducted for a manager of an industry coalition to conduct the work. The project conducts industry/Government pilots in the following five areas: 1) effective supply partnerships; 2) significant improvement in quality and access to technical data; 3) a streamlined maintenance process; 4) upgrade strategies for increased reliability and 5) innovative training. The goals are to reduce total costs of spares/replacements, cut the time from requirement to delivery for supplies and cut repair cycle.</p> <p>C. Other Program Funding Summary: N/A</p>							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number – Supply Chain Management (SCM), Project 9		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 9: SCM	15.564	3.375	3.457	3.457	3.453	-----	-----
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: The DLA mission is to get the right item, at the right time, to the right place, at the right price, every time, in support of America's warfighter. To accomplish its mission DLA must use an integrated combat logistics solution that is coordinated among the services and across DoD to meet all combat support requirements in peace and war. There is a need for the Agency to stay abreast of the latest supply chain management principals and techniques that will improve the supply availability of DLA managed items by assembling supply chains to shorten lead times and reduce costs. The Agency must ensure that outsourcing strategies are coordinated; performance measures are in place to measure effectiveness, that the organizational structure promotes successful supply chain management and to incorporate the latest electronic commerce initiatives into its supply chain. The congressionally added Defense Supply Chain Technology Program (DSCT) program is funded here in FY 2003 (\$11.673 million).</p>							
B. Accomplishments/Planned Program:							
	FY 03	FY 04		FY 05			
SCM/DSCT	15.564	3.375		3.457			
RDT&E Articles Quantity - N/A							
<p>We are managing both the baseline SCM (3.891M) and congressionally added DSCT (11.673) as a single program. Our program will initiate some 20 Supply Chain Management Projects for DLA and the Services, which are in the following areas as they emerge from our current transformation efforts: supplier facing, customer facing, DLA Direct, customer Direct, and process enhancement.</p>							
<p>C. Other Program Funding Summary: N/A</p>							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number- Agent Based Logistics Processes (ABLP), Project 10		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 10: ABLP	-----	-----	-----	-----	-----	2.969	3.267
RDT&E Articles Quantity - N/A							
A. Mission Description and Budget Item Justification: Project will develop plans and tools for flexible responses to changing supplier and demand data. It will provide the ability to link into war planning systems to address the ability of the industrial base to meet National Emergency Requirements. Nothing funded until FY08.							
B. Accomplishments/Planned Program: N/A							
	FY 03	FY 04		FY 05			
Accomplishment/ Effort/Subtotal Cost	-----	-----		-----			
RDT&E Articles Quantity – N/A							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification						Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – eMASS (Completion Project), Project 11			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 11: eMASS (Completion Project)	-----	1.265	0.490	0.490	0.489	0.488	0.487
RDT&E Articles Quantity - N/A							
A. Mission Description and Budget Item Justification: Enterprise Mission Assurance Support System (eMASS) is a comprehensive, enterprise-wide capability that automates all major information assurance processes including certification and accreditation, vulnerability management, incident response, INFOCON level management and control, IA resource planning and management, circuit connection management, contingency planning, and IA command and control. It has OSD support since it will be used across DoD. eMASS will provide a single information assurance exchange standard across the DoD Global Information Grid (GIG) and will be an implementation of Security Assertion Markup Language (SAML), an XML based exchange standard. eMASS is being developed through a partnership with C3I, and will vet the policy requirements of an emerging family of information assurance policies called the 8500 series. eMass started within the PUL Log R&D. This R&D funding is needed for eMASS project completion.							
B. Accomplishments/Planned Program:							
	FY 03		FY 04		FY 05		
Accomplishment/ Effort/Subtotal Cost	-----		1.265		0.490		
RDT&E Articles Quantity – N/A							
Complete fully functional eMASS prototype in XML schema and XSLT style sheets. Complete SAML exchange standard for certification and accreditation security assertions. Fully integrate eMASS with the Open Vulnerability Assessment Language (OVAL) standard by developing an exchange standard with the Mitre Corporation Outpost automated toolset.							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – Defense Microelectronics Activity (DMEA), Project 12			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 12: DMEA	58.321	73.314	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
A. Mission Description and Budget Item Justification: The Defense Microelectronics Activity (DMEA) mission is to leverage advanced technologies to extend the life of weapon systems, to solve operational problems (e.g., reliability and maintainability) and to address diminishing manufacturing sources. The DMEA provides technical and application engineering support for the implementation of advanced microelectronics research technologies from design through assembly and installation. The DMEA manages an organic capability to support these strategically important technologies within the DoD. These advanced technologies are translated into solutions for military needs. DMEA's RDT&E program is comprised of a mix of studies, investigations, planning efforts, developments, fabrications, and the insertions of solutions. This effort applies to all DoD systems using electronics e.g., F-22, B-2, AWACS, F-16, F-15, F-14, GPS, USQ-113, JAST, EA-6B, M-65, AN/TSC-93B, and AN/GSC-49 (V). Funds are required for technical and analytical support, equipment, supplies, travel, and publications.							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	8.513	8.410	-----				
RDT&E Articles Quantity – N/A							
Center for Nanosciences Innovation efforts are to systematically clarify the feasibility of applying nanoscience and technology to defense requirements.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	6.809	10.091	-----				
RDT&E Articles Quantity – N/A							
Advanced Spray Cooling Technology efforts are to develop standardized advanced spray cooling technology products, demonstrate them in cross-platform migrations, and develop an automated process for integration of spray cooling products into military systems.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	6.225	11.873	-----				
RDT&E Articles Quantity – N/A							
Optimizing Electronics for Advanced Controlled Environment Systems (ACES) efforts are to resolve thermal issues regarding electronics densification & advanced electronics packaging in military applications by designing components, chip-scale packaging, stacked structures, and electronic environmental systems that can withstand the demanding military thermal environments.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	24.321	29.681	-----				
RDT&E Articles Quantity – N/A							
Ultra-low Power Battlefield Sensor Communication System (ULBPSCS) efforts are to develop a netted battlefield sensor system with a combination of ultra-sensitive receivers, ultra-low power miniature sensors, advanced manufacturing processes, and a real-time mission critical distributed information system.							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – Defense Microelectronics Activity (DMEA), Project 12			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 12: DMEA	58.321	73.314	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
B. Accomplishments/Planned Program: (continue d)							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	6.809	7.619	-----				
RDT&E Articles Quantity – N/A							
Miniaturized Wireless Communications System (Chameleon) efforts are to develop a covert self-contained microsensor package with on-board real-time mission critical information processing and an ultra-sensitive high temperature super-conducting transceiver.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	1.947	1.236	-----				
RDT&E Articles Quantity – N/A							
Silicon Germanium Technology efforts are to develop viable methods to replace microcircuits that are used in high performance digital and mixed signal applications for DOD weapon systems.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	2.237	-----	-----				
RDT&E Articles Quantity – N/A							
High Power Microelectronics efforts are to develop viable methods to replace high power microcircuits in the 40-volt to 100-volt range that are used in DOD weapon systems.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	1.460	1.187	-----				
RDT&E Articles Quantity – N/A							
Ferrite Diminishing Manufacturing Program efforts are to assess the viability of alternative approaches to and prospective technologies for the mitigation of ferrite diminishing manufacturing source issues in microwave/millimeter-wave-based DOD weapon systems.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	-----	1.237	-----				
RDT&E Articles Quantity – N/A							
Commercial-off-the-shelf (COTS) Microelectronics Sustainment efforts are to archive an optimal set of robust processes which, together, can solve the obsolescence of a diverse number of circuit functions.							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	-----	0.990	-----				
RDT&E Articles Quantity – N/A							
Functional Decomposition of Application Specific Integrated Circuits (ASIC) efforts are to develop the processes necessary to fabricate replacement processor components in DMEA's Flexible Foundry. The scope of the effort will include developing the ability to design, simulate, operate and test newly developed,							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number – Defense Microelectronics Activity (DMEA), Project 12		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 12: DMEA	58.321	73.314	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
B. Accomplishments/Planned Program: (continued) complex designs without having to prototype the hardware.							
	FY 03	FY 04		FY 05			
Accomplishment/ Effort/Subtotal Cost	-----	0.990		-----			
RDT&E Articles Quantity – N/A							
Integration and Assimilation of Hard and Soft Core Intellectual Property (IP) efforts develops methods for using existing hard cores as building blocks for complex chips, incorporating hard cores with soft cores in a single design, and fabricating these designs in the Flexible Foundry.							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number – Other Congressionally Added Programs (OCAs), Project 13			
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 13: OCAs	22.955	20.381	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
A. Mission Description and Budget Item Justification: Congressionally added programs that reflect a range of related advanced technologies.							
B. Accomplishments/Planned Program:							
	FY 03	FY 04	FY 05				
Accomplishment/ Effort/Subtotal Cost	22.955	20.381	-----				
RDT&E Articles Quantity – N/A							
FY 2003: <ul style="list-style-type: none"> HDTCC (\$1.751) – Homeland Defense Technology Collaboration Center. Congressional Add. Program Management. Funding was used to create a collaborative environment among the Homeland Defense communities and to transition current technology developed for the military to homeland defense activities. VFCP (\$6.808) – Vehicle Fuel Cell Programs. Congressional Add. US Army TACOM oversaw this add on behalf of DLA. FCL (\$0.973) – Fuel Cell Locomotives. Congressionally Add. US Army TACOM oversaw this add on behalf of DLA. APD (CC DOT) (\$4.184) – Agile Port Demonstrator. Congressional Add. OSD (DDR&E)/WHS oversaw this project on behalf of the DLA. NEMSC (\$5.835) – New England Manufacturing Supply Chain. Congressional Add. DLA will work with the Department of Commerce (NIST) to jointly oversee this add. MRLN (\$3.404) – Maintainers Remote Logistics Network - US Army TACOM managed this add on behalf of DLA. FY 2004: These programs are in the Requirements Definition Phase and final details have not been developed. <ul style="list-style-type: none"> California Manufacturing Center (\$5.046) Connectivity for Rapid ID of Tech Center (\$0.990) Vehicle Cell (\$4.847) Fuel Cell Mine Loader Prototype Locomotive (\$0.990) Wireless Rural Communication Demonstration (\$2.968) New England Manufacturing Supply Chain (\$5.540) 							
C. Other Program Funding Summary: N/A							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number – Logistics Domain (LD), Project 14		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 14: LD	1.250	-----	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: This effort supports the portfolio management and enterprise architecture portions of the LSM mission. In support of portfolio management, the contractor shall continue to define and execute the necessary activities for the Logistics Domain. The goal of this tasking is to support the mission of the Logistics Domain as it exercises its responsibilities in the areas of compliance, domain advocacy, and investment analysis and to ensure horizontal (with other Domains) an vertical (with Business Management Modernization Program and with the Components) coordination occurs.</p>							
B. Accomplishments/Planned Program:							
	FY 03	FY 04		FY 05			
Accomplishment/ Effort/Subtotal Cost	1.250	-----		-----			
RDT&E Articles Quantity – N/A							
<p>C. Other Program Funding Summary: N/A</p>							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 3					Project Name and Number – Continuous Acquisition Life Cycle Support (CALS), Project 15		
Cost (\$ in millions)	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Project 15: CALS	-----	3.831	4.000	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification: This effort was transferred from the Office of the Secretary of Defense (OSD) to the Defense Logistics Agency (DLA) for the Continuous Acquisition and Life-cycle Support Initiative (CALS) program. CALS is a core strategy program to share integrated digital product data through a set of standards to achieve efficiencies in business and operational mission areas. DoD's overarching goal in CALS is to develop a seamless defense enterprise in which the knowledge products of the acquisition process are immediately and rapidly accessible to all authorized users while maintaining near immediate currency and quality of information. This program element is used to (1) assess and transition evolving automated technologies into the CALS Strategy; (2) develop, maintain and apply to weapon system program office operations an executable business model for the application of CALS and related technologies; and, (3) integrate technical and functional requirements into a shared information framework of the standards, protocols, procedures and network management conventions required to achieve a shared data environment throughout the international defense enterprise. CALS will support six on-going high-technology programs.

B. Accomplishments/Planned Program:

	FY 03	FY 04	FY 05
Accomplishment/ Effort/Subtotal Cost	-----	3.831	4.000
RDT&E Articles Quantity – N/A			

C. Other Program Funding Summary: N/A